

# NORTHWEST SEWER IMPROVEMENTS PROGRAM

## MAIN 3 (PART A)

**From 900' West of 119th Street West to 100' East of Parkridge North**

**Parallel to 21st Street North**

**CITY OF WICHITA, KANSAS**

**MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER**

**PROJECT NO. 468-83133**

**OCA # 624060**

## MAIN 1 FORCE MAIN (PART B)

**From 350' East of Parkdale North to 100' East of Parkridge North**

**Parallel to 21st Street North**

**CITY OF WICHITA, KANSAS**

**MICHAEL E. LINDEBAK, P.E. - CITY ENGINEER**

**PROJECT NO. 468-83131**

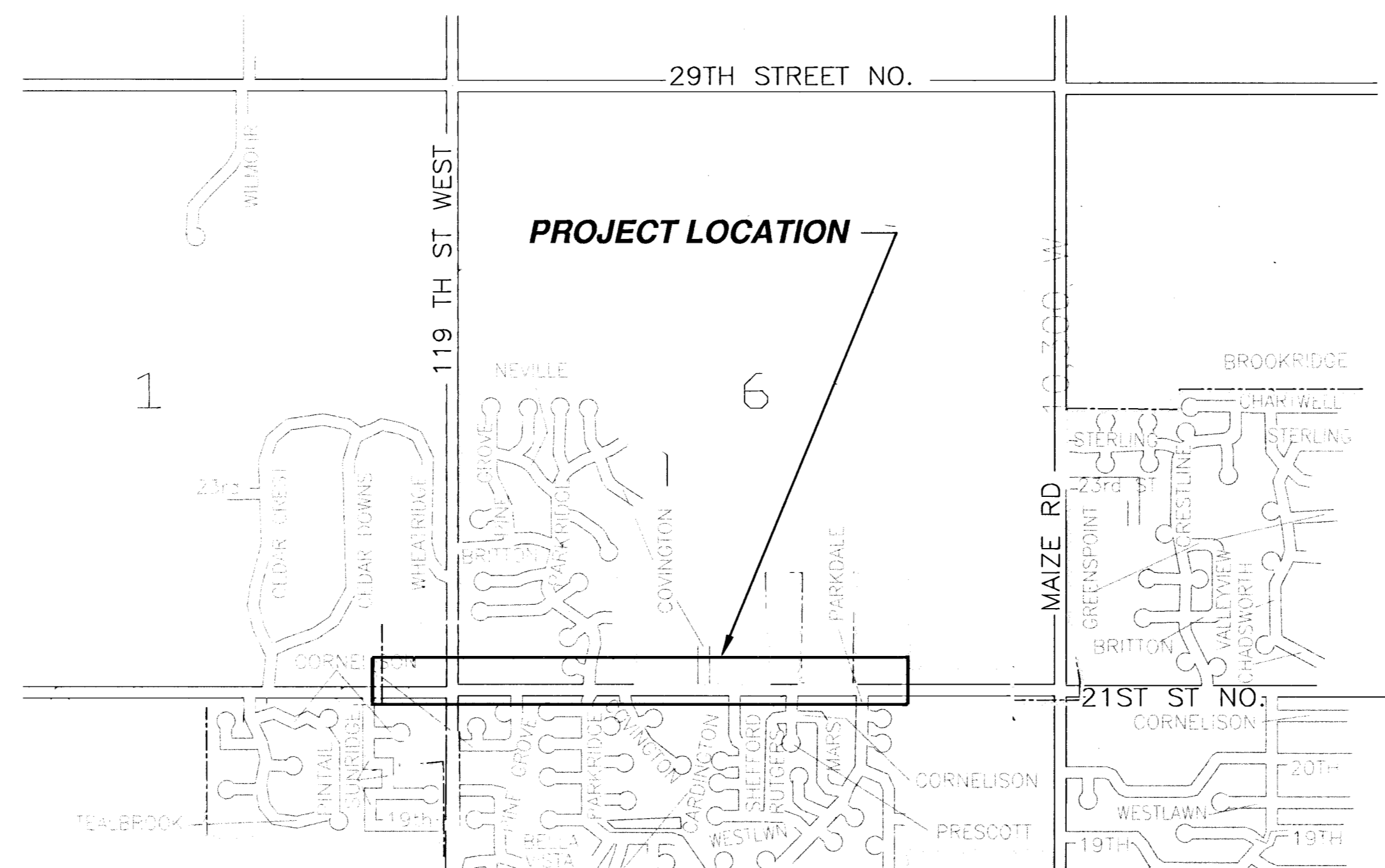
**OCA # 624058**

### GENERAL NOTES

- Contractor will be required to provide a minimum advance notice of forty-eight (48) hours to utility companies prior to starting any excavation as follows:  

Kansas One-Call	687-2470
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- The Contractor must notify the following in case of an emergency:  

Cox Communications	262-0661
Kansas Gas Service	832-3169
KGE	383-8600
Peoples Natural Gas Company	946-0096
Southwestern Bell Telephone Company	1-800-734-7590
City of Wichita Water Department	262-6000
City of Wichita Sewer Maintenance	262-6000
- Contractor shall not start work on the project until the project inspector is assigned to the project and is present on the site. Any work done without inspection will be required to be uncovered for inspection.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations that, in the opinion of the Engineer, will leave an unsightly appearance will not be approved.
- All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain would require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits would require additional archeological investigations unless buried in a previously approved borrow location.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
- All construction involving the new sewer system shall be in accordance with City of Wichita Standard Specifications dated March 1998.
- 2-way traffic will need to be maintained at all times throughout the project.
- Force main piping shall be either D1CL Pressure Class 350, HDPE C906-90 or PVC C-900 Pressure Class 100 in accordance with City of Wichita Standard Specifications for waterline construction. Installation of force main may be done by open-cut method or directional drilling. The procedure used shall comply with City of Wichita Standard Specifications. Open cut method shall have the backfill above a depth of 12" over top of sewer pipe compacted to 95% of standard density.
- Force main shall under go a pressure test to 100 psi per City of Wichita Standard Specifications for waterline construction.
- Directional drilling or boring of force mains under drives, streets and/or trees must be approved by the Construction Engineer. Drilling or boring without casing pipe will be allowed. The Contractor will be responsible for any pavement settlement caused by drilling or boring the new force main. The Contractor will submit in writing his proposed method for drilling or boring of pipe to the Engineer for approval prior to any construction. Any pipe installed by a method not approved by the Engineer in writing will be removed.
- Asphalt pavement replacement shall be considered and bid 'Temporary Pavement Replacement'. Pavement replacement shall consist of 5" asphalt cement pavement. NO COLD PATCH ALLOWED. Contractor shall maintain temporary pavement until the paving contractor starts the 21st Street North improvements.
- The Contractor shall not bury manholes that have rim elevations which are lower than existing ground at the manhole. The ground around such manholes and along the sewer alignment shall be backfilled to the approximate elevation of the proposed ground elevation shown on the plan/profile sheets. The Contractor shall provide drainage away from these manholes and sewer lines by construction of temporary ditches or sloping the ground as required. All costs for this work shall be considered subsidiary to the lump sum price bid for 'Site Restoration'.
- The Contractor shall provide mounded earth at manholes that have top elevations greater than 1 foot above existing grade as shown on the plans. Costs for mounding shall be considered subsidiary to the lump sum price bid for 'Site Restoration'.
- All manhole interiors need to be plastic lined or coated with an approved equal.
- Properties within the project may have underground irrigation systems (lawn sprinklers) which conflict with new construction. Contractor shall remove such components as needed during construction of the project. The irrigation system shall be reinstalled in like kind before project completion. Any irrigation system modifications required because of project improvements shall be coordinated with the property owner. Portions of underground irrigation systems not in conflict with new construction shall be protected from damage and shall remain in place.

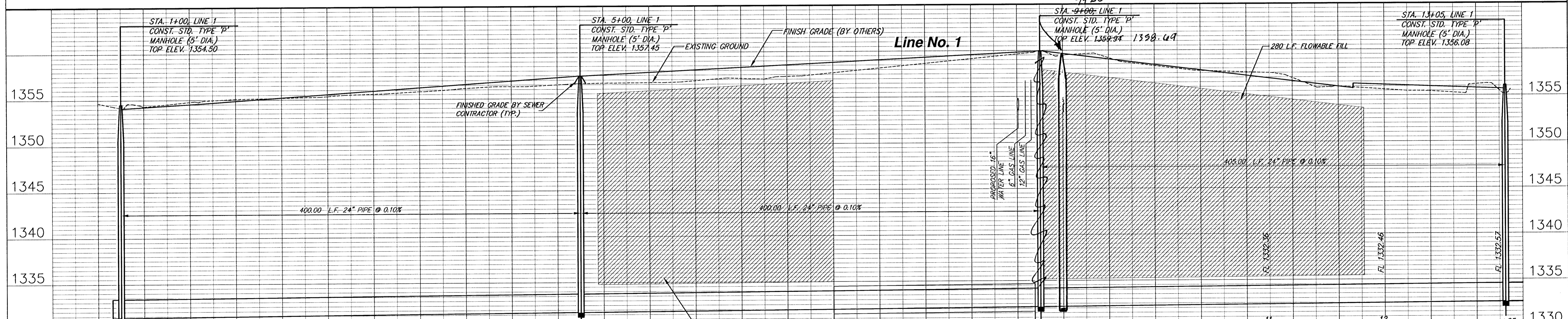
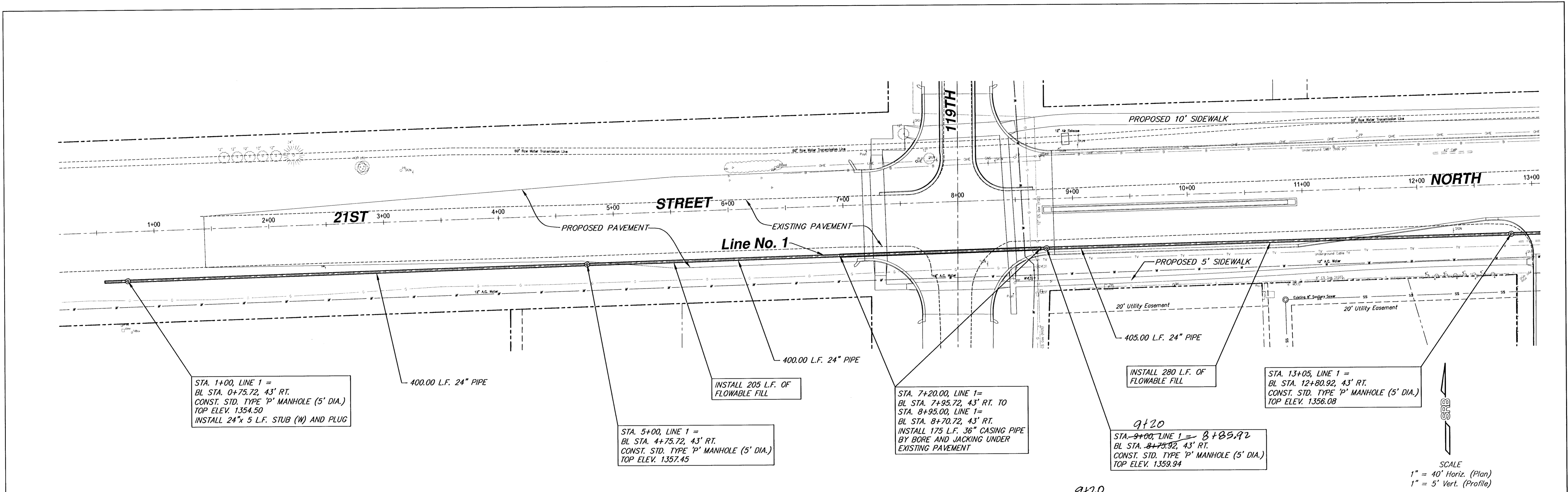


### INDEX

- TITLE SHEET
- LINE 1 (PART A)
- STANDARD TYPE 'P' MANHOLE (PART A)
- MANHOLE FRAME AND COVER (PART A)
- LINE 1 (PART B)
- MISCELLANEOUS DETAILS (PART B)

AS BUILT  
4/24/03  
R. Loomis  
P.D.F.





**MAIN 3 OF THE NORTHWEST INTERCEPTOR SEWER (PART A)  
LINE 1, STA. 0+80 TO 13+05  
PARALLEL TO 21ST STREET NORTH**

**SRB** 924 NORTH MAIN WICHITA, KANSAS 67203 316-264-8008 FAX 264-4621 http://www.srb1.com E-Mail: srb@srb1.com

**SAVOY, RUGGLES & BOHM, P. A.  
ENGINEERING & SURVEYING**

PROJECT NUMBER: 468-83133

DESIGN: MWS	DRAWN: TEB	UTILITY	REVIEW	DATE: Apr. 9, 2001	REVISED
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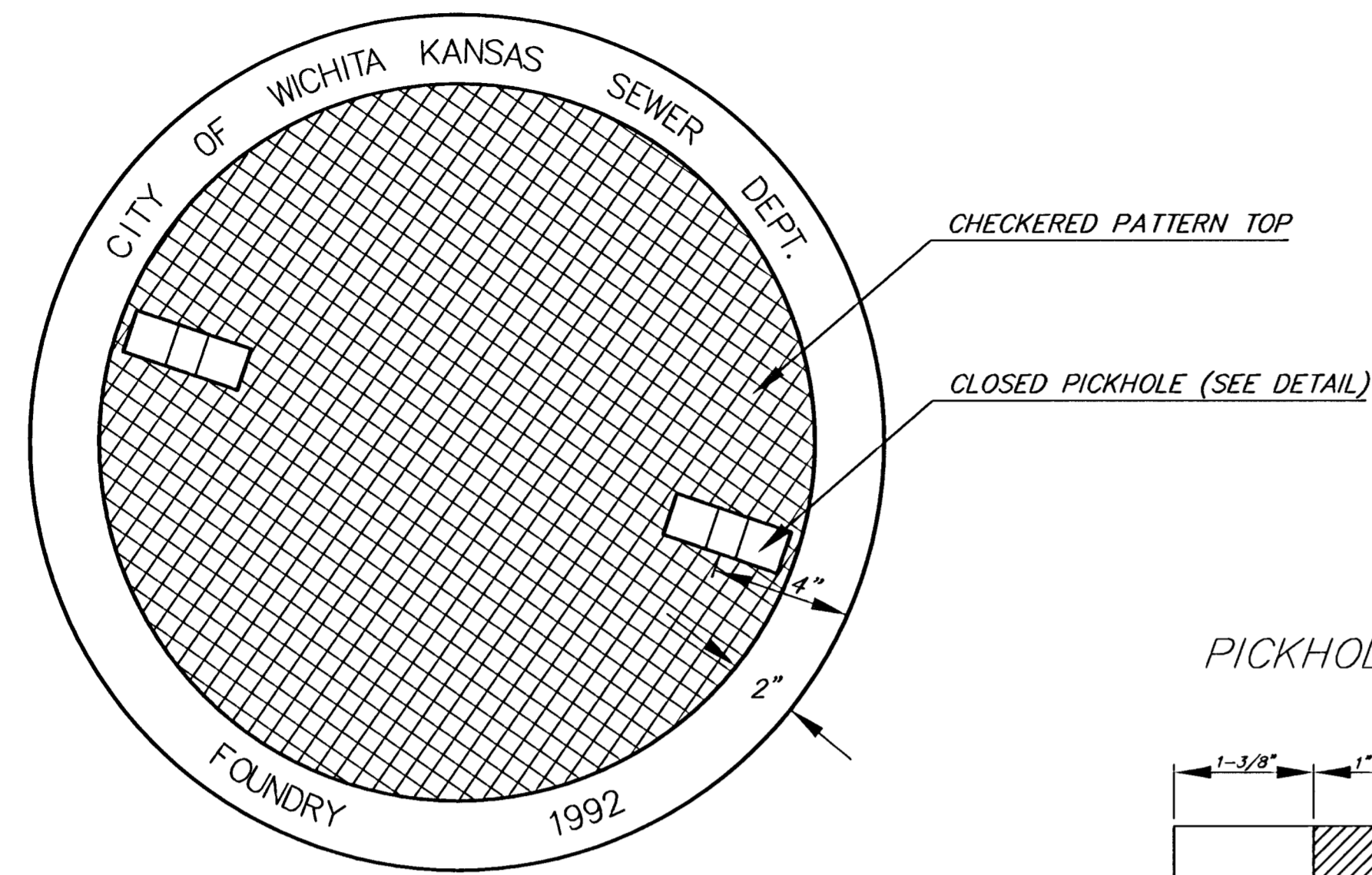
DATE: 24 SS 01

SHEET: 2 OF 9



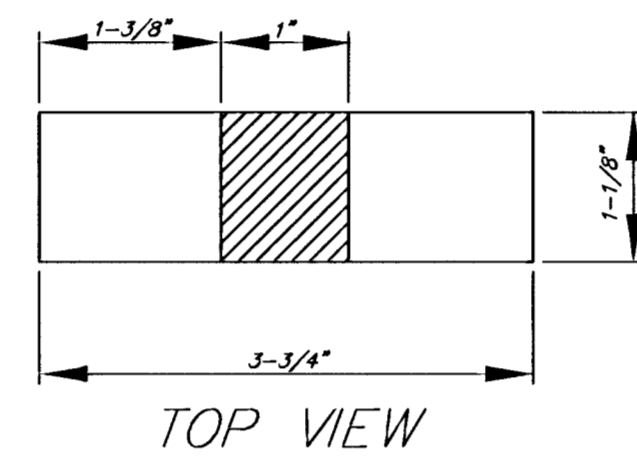


MANHOLE COVER  
Weight = 180 Lbs.

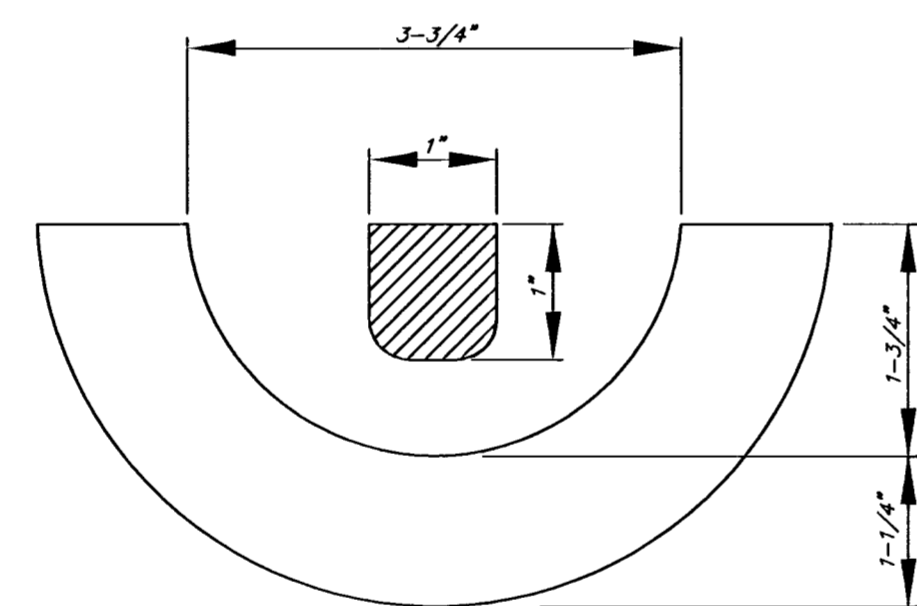


TOP VIEW

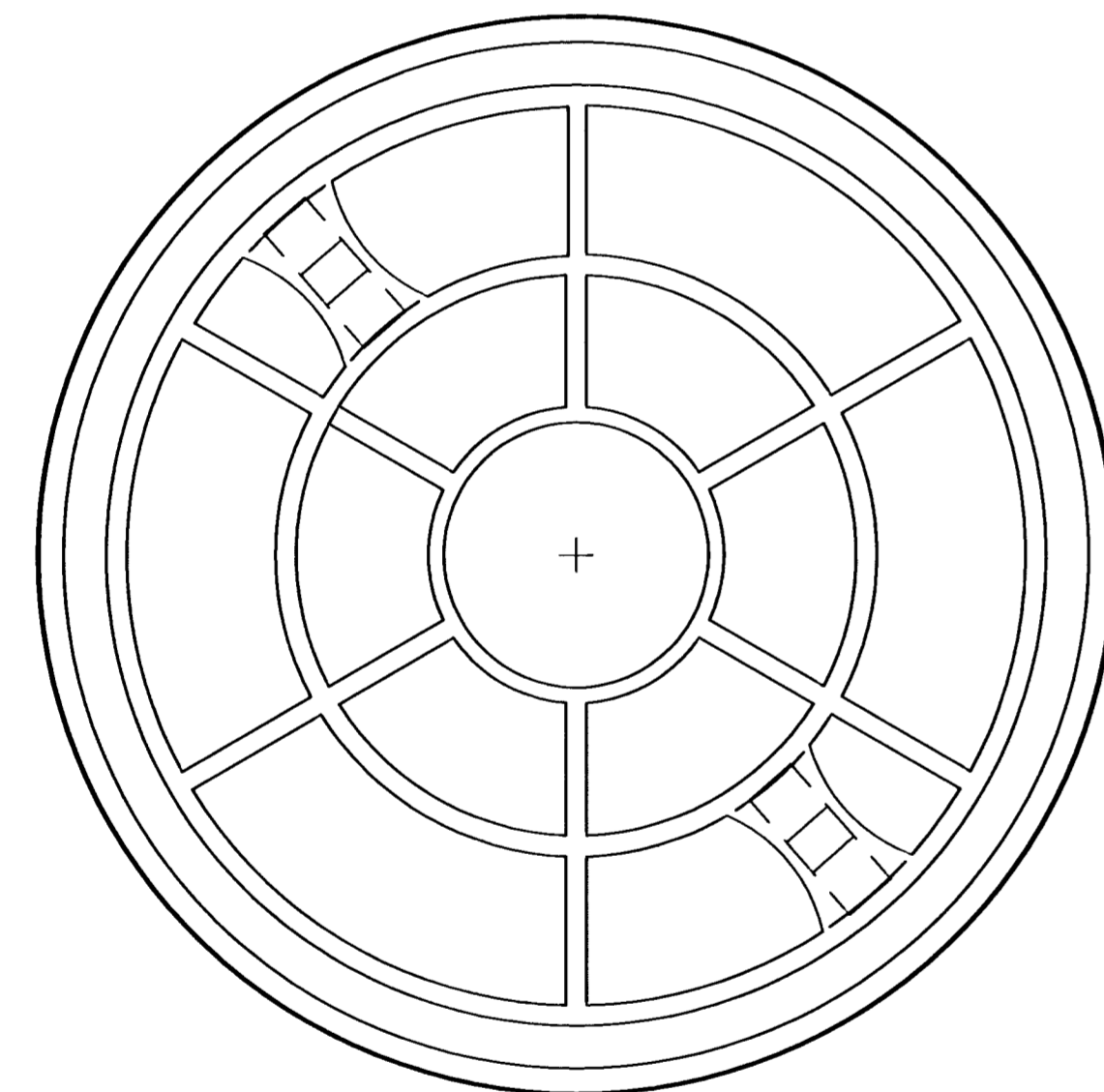
PICKHOLE DETAIL



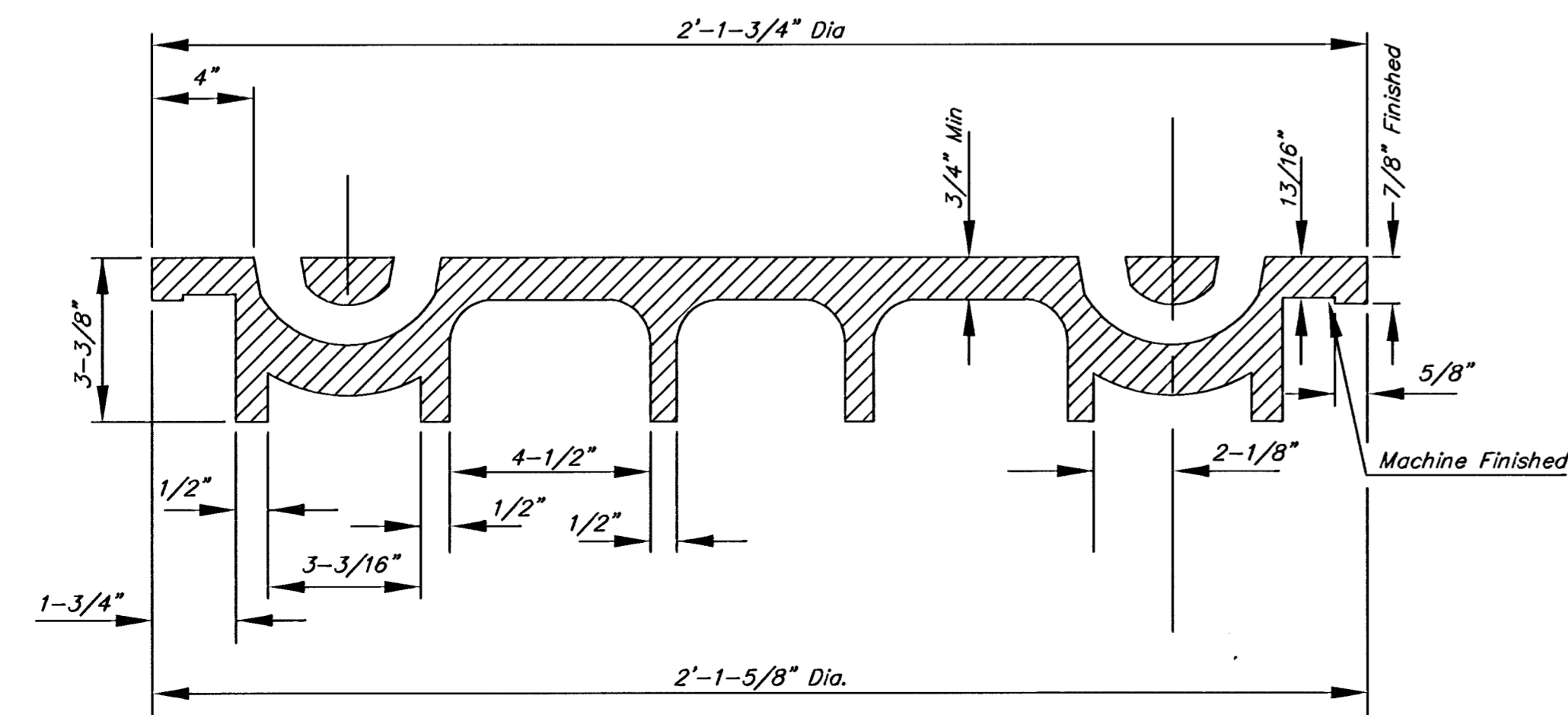
TOP VIEW



SECTION VIEW



BOTTOM VIEW

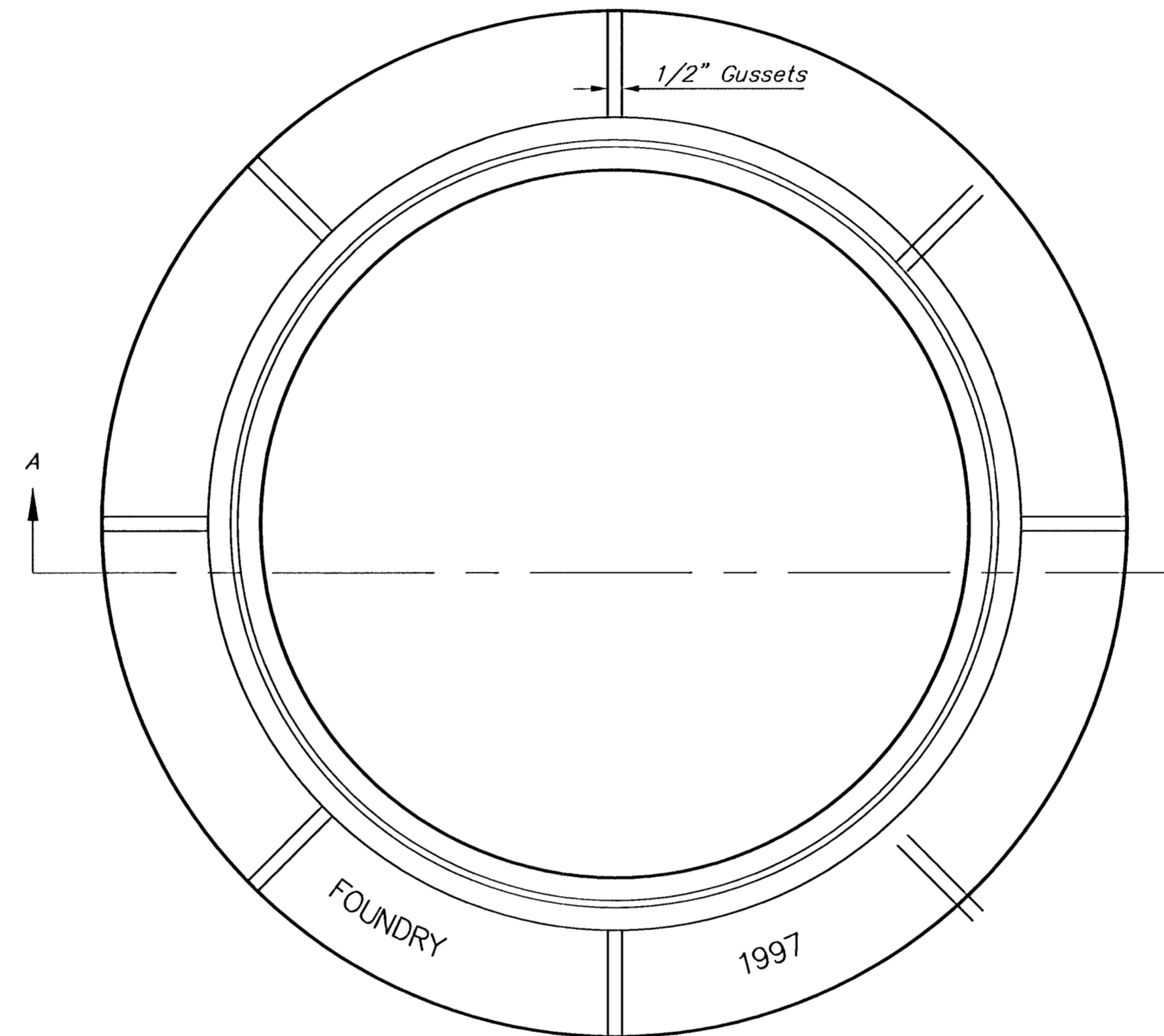


SECTION VIEW

# MANHOLE FRAME AND COVER DETAIL

ADOPTED AS STANDARD DESIGN BY  
CITY OF WICHITA, KANSAS

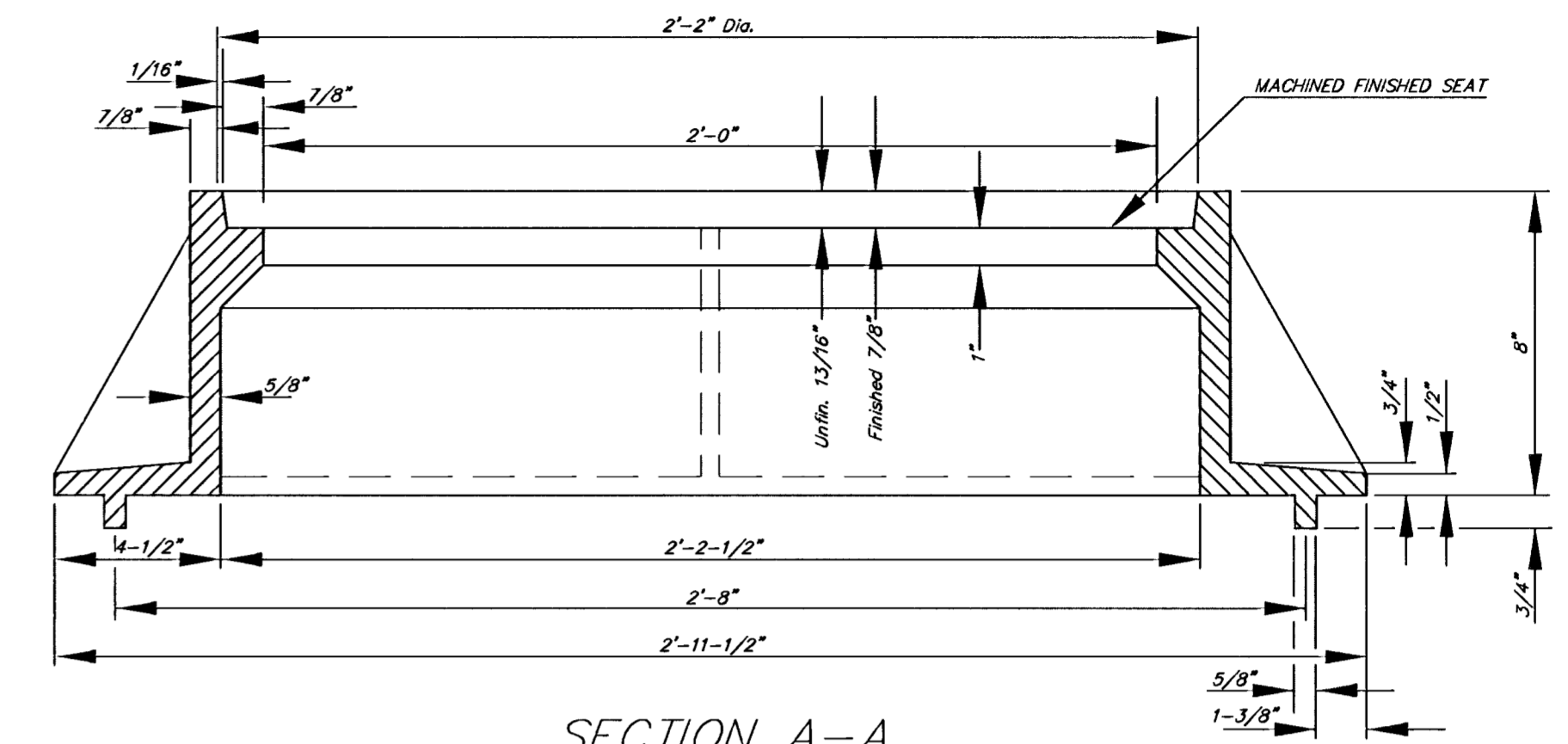
MANHOLE FRAME  
Weight = 240 Lbs.



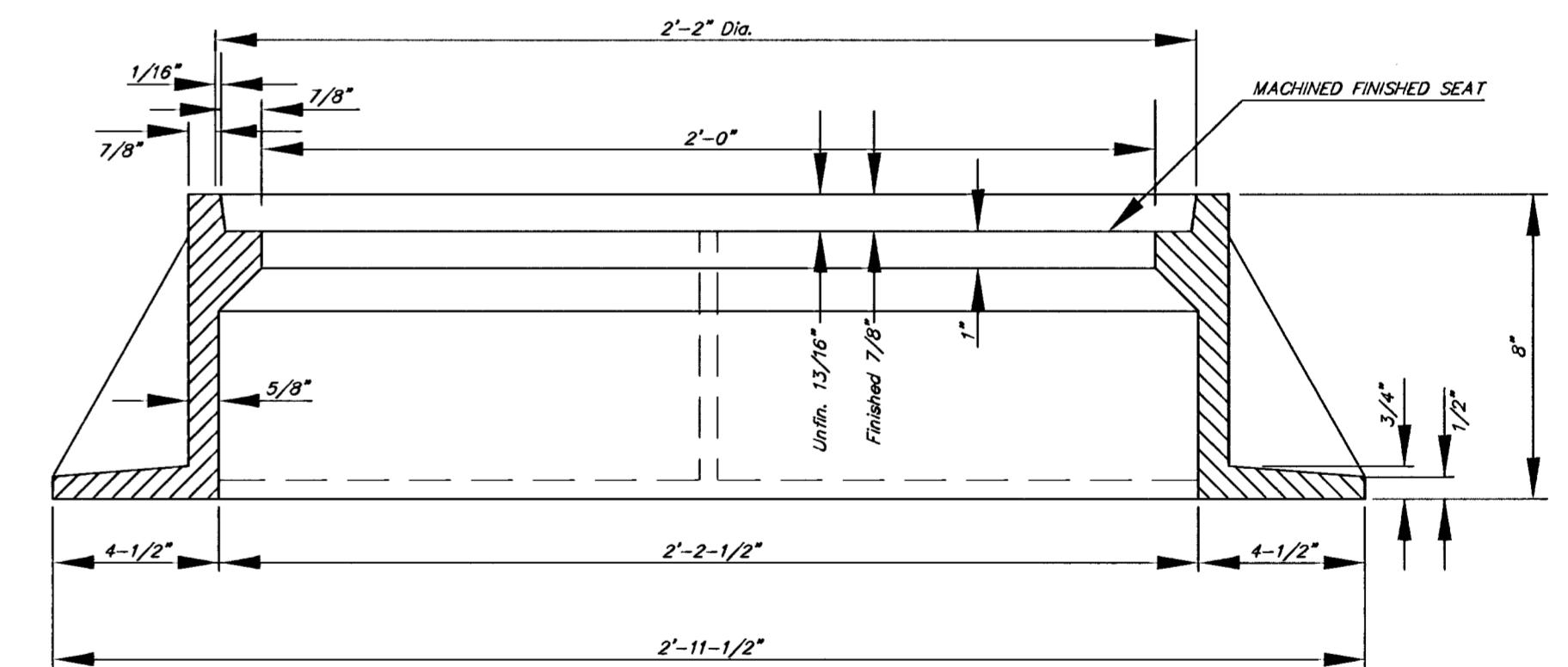
TOP VIEW

## GENERAL NOTES

- MANHOLE CASTINGS SHALL BE MANUFACTURED USING GOOD QUALITY GRAY IRON CONFORMING TO CLASS 30 OF A.S.T.M. DESIGNATION A-48. DIMENSIONS AND WEIGHTS SHOWN ON THE DETAILED DRAWINGS SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS AND ANY DEVIATIONS FROM THE DIMENSIONS SHOWN MUST BE SPECIFICALLY APPROVED. THE FINISHED CASTINGS SHALL BE OF UNIFORM QUALITY, FREE FROM BLOWHOLES, POROSITY, HARD SPOTS, SHRINKAGE DISTORTIONS OR OTHER DEFECTS.
- MANHOLE CASTINGS SHALL WEIGH A MINIMUM OF 180 POUNDS ON THE SOLID COVER AND 240 POUNDS ON THE MANHOLE RING. THIS IS A TOTAL OF 420 POUNDS ON A RING AND COVER SET. CASTINGS WEIGHING LESS THAN THE MINIMUM SPECIFICATIONS WILL NOT BE ACCEPTED.
- MANHOLE CASTINGS SHALL BE MANUFACTURED SUCH THAT A COVER MANUFACTURED BY ANY ONE FOUNDRY WILL FIT INTERCHANGEABLY INTO A FRAME MANUFACTURED BY ANOTHER FOUNDRY AND STILL MEET ALLOWABLE CLEARANCES AND NON-ROCKING REQUIREMENTS. THIS WILL REQUIRE MANUFACTURING OF THE MATCHING FACES ON THE COVER AND THE FRAME TO CLOSE TOLERANCES.
- THE OUTSIDE CIRCUMFERENCE OF THE VERTICAL FACE OF THE COVER AND THE INSIDE CIRCUMFERENCE OF THE VERTICAL FACE IN THE FRAME RECESS SHALL BE MANUFACTURED TO TOLERANCES SUCH THAT THE CLEARANCE BETWEEN THE COVER AND FRAME WILL NOT EXCEED 1/8" AT ANY POINT AROUND THE CIRCUMFERENCE OF THE COVER. THE SEATING SURFACES BETWEEN THE COVER AND FRAME SHALL BE MACHINED SUCH THAT THESE SEATING SURFACES SHALL MAKE FULL CONTACT FOR THEIR FULL CIRCUMFERENCE TO PRECLUDE THE COVER FROM ROCKING IN THE FRAME.
- THE MANHOLE FRAME AND COVER SHALL BE MARKED WITH LETTERING INDICATING THE NAME OF THE MANUFACTURER AND THE YEAR WHEN THE COVER OR FRAME WAS CAST. THE COVER SHALL BE FURTHER IDENTIFIED WITH REGARDS TO OWNERSHIP USING LETTERS AT LEAST 1 INCH IN HEIGHT. THIS IDENTIFICATION SHALL BE "CITY OF WICHITA SEWER DEPARTMENT". THE WORD DEPARTMENT MAY BE ABBREVIATED. THE TEXTURE OF THE TOP SURFACE OF THE COVER SHALL BE MANUFACTURED IN A CHECKERED PATTERN DESIGN AS INDICATED ON THE DRAWINGS. SMOOTH BLOCKOUTS SHALL BE UTILIZED TO HIGHLIGHT THE LETTERING ON THE COVER SURFACE. THE TOTAL AREA OF SMOOTH SURFACE BLOCKOUT SHALL NOT EXCEED THE AREA AS INDICATED ON THE DRAWING. POSITIONING OF SMOOTH SURFACE BLOCKOUT AND LETTERING MAY VARY FROM THAT SHOWN ON THE DETAILED DRAWING.

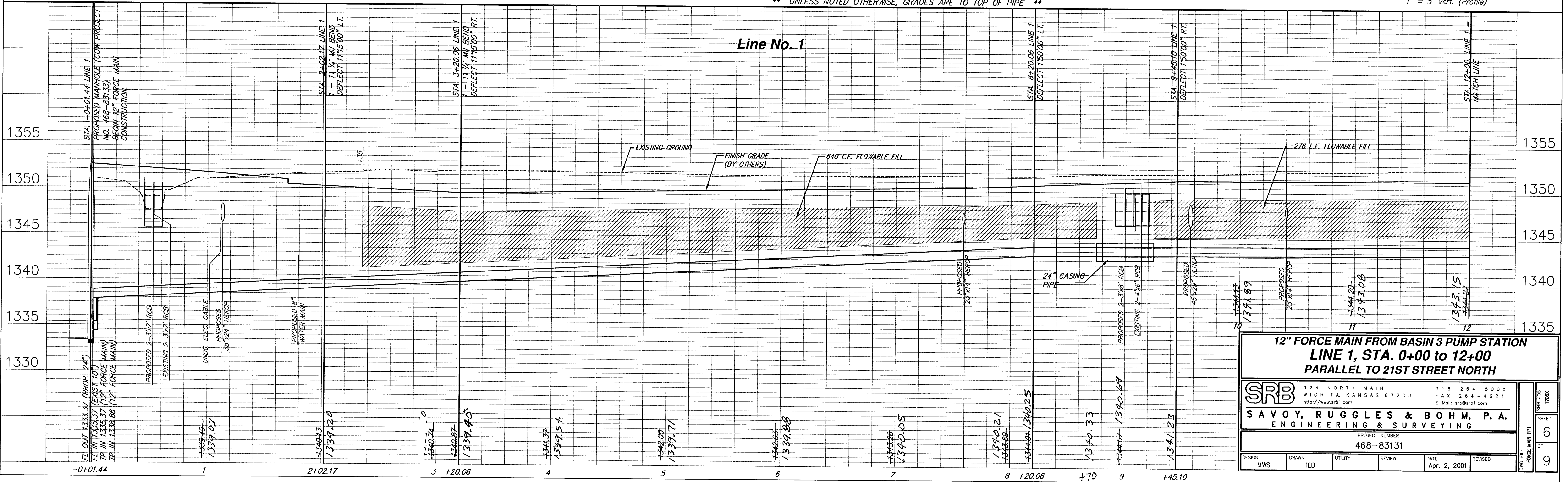
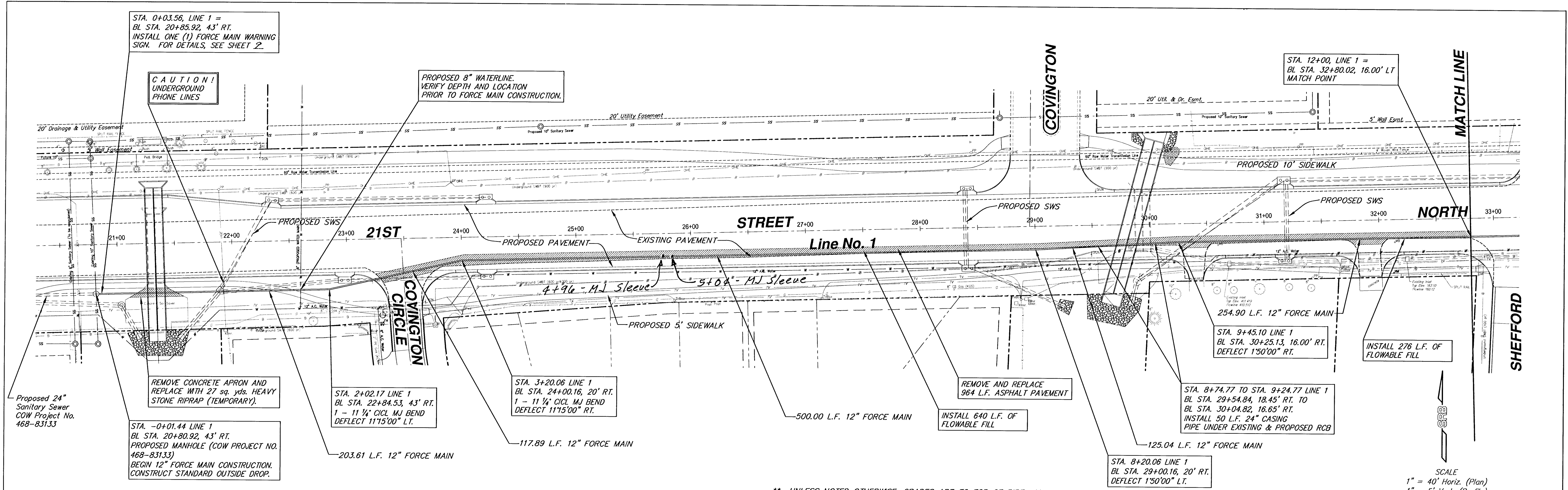


SECTION A-A  
MUD RING



SECTION A-A

<p>THE CITY OF WICHITA CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4501 (316) 268-4114 FAX</p>	<b>MANHOLE FRAME AND COVER</b>	
	M. E. LINDEBAK P.E. - CITY ENGINEER	
	PROJECT NUMBER <b>468-83133</b>	OC# <b>624060</b>
	DATE MAR 96	SHEET 5 OF 9



**12" FORCE MAIN FROM BASIN 3 PUMP STATION  
LINE 1, STA. 0+00 TO 12+00  
PARALLEL TO 21ST STREET NORTH**

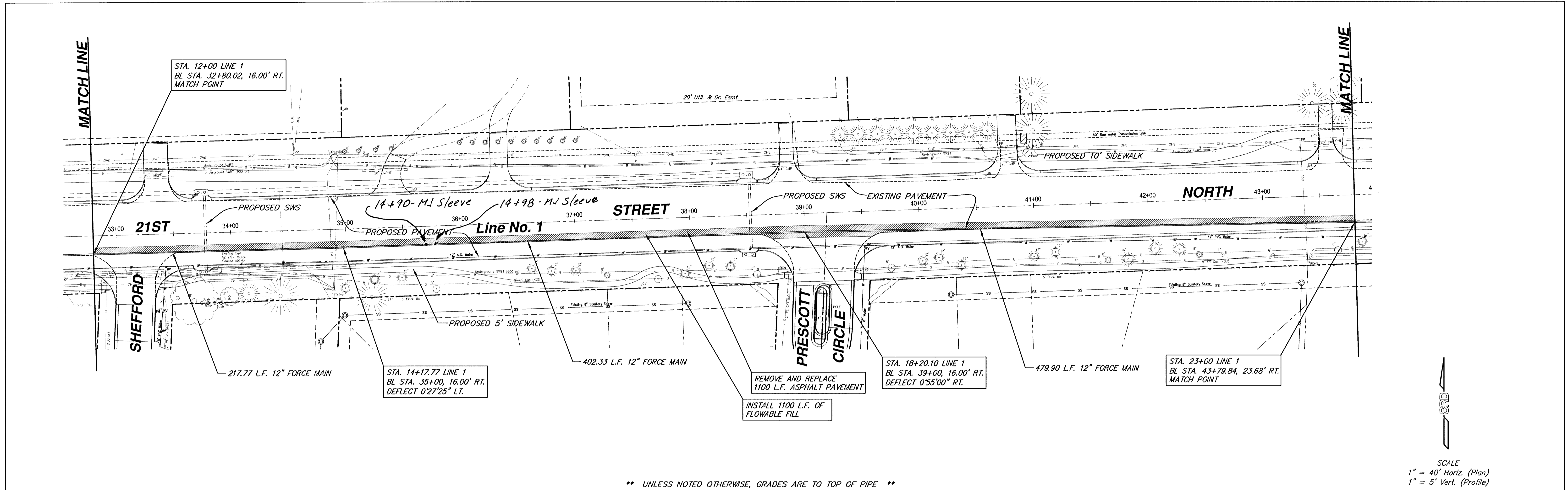
**SRB**  
924 NORTH MAIN WICHITA, KANSAS 67203  
316-264-8008 FAX 264-4621  
http://www.srb1.com E-Mail: srb@srb1.com

**SAVOY, RUGGLES & BOHM, P.A.**  
ENGINEERING & SURVEYING

PROJECT NUMBER  
468-83131

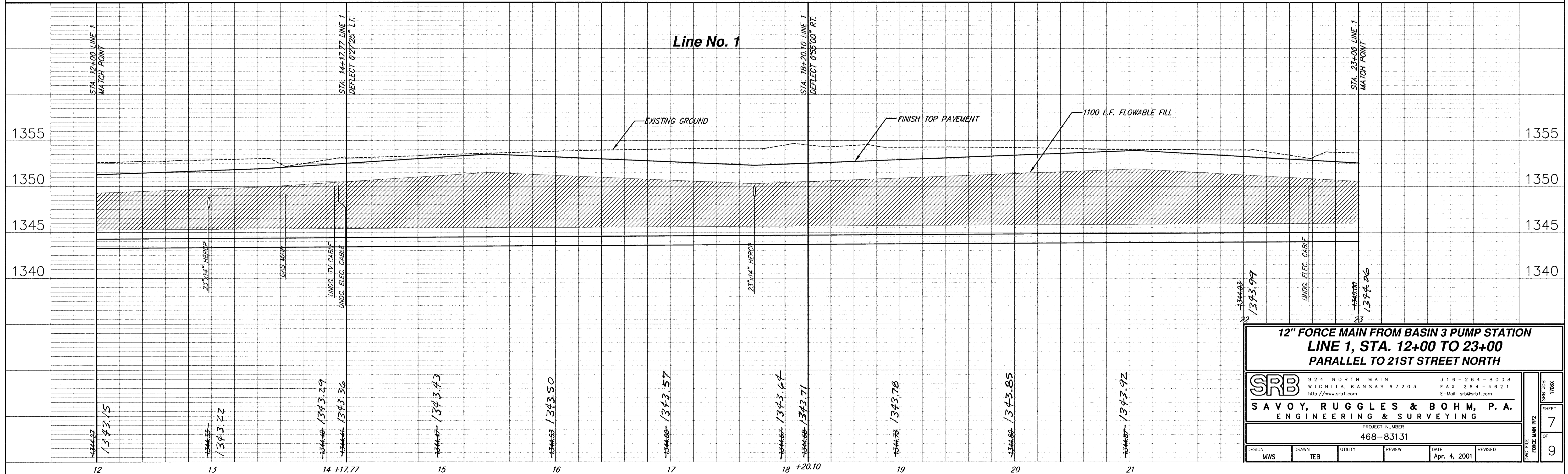
DESIGN	DRAWN	UTILITY	REVIEW	DATE	REVISED
MWS	TEB			Apr. 2, 2001	

SRB JOB SHEET 0 OF 9



\*\* UNLESS NOTED OTHERWISE, GRADES ARE TO TOP OF PIPE \*\*

SCALE  
 1" = 40' Horiz. (Plan)  
 1" = 5' Vert. (Profile)



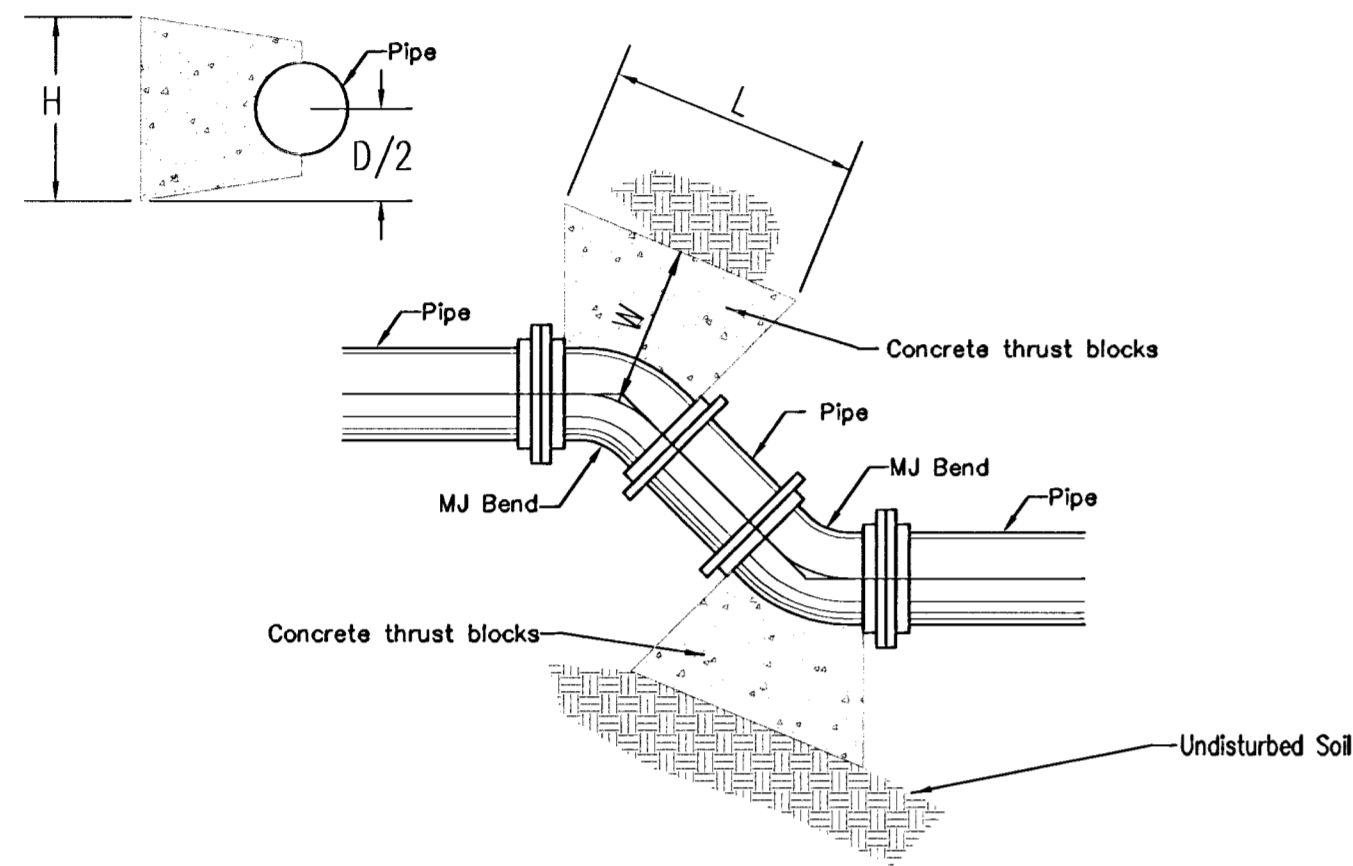
**12" FORCE MAIN FROM BASIN 3 PUMP STATION  
 LINE 1, STA. 12+00 TO 23+00  
 PARALLEL TO 21ST STREET NORTH**

<b>SRB</b>		316-264-8008
924 NORTH MAIN		FAX 264-4621
WICHITA, KANSAS 67203		E-Mail: srb@srb1.com
http://www.srb1.com		
PROJECT NUMBER 468-83131		
DESIGN MWS	DRAWN TEB	UTILITY REVIEW
DATE Apr. 4, 2001		REVISED

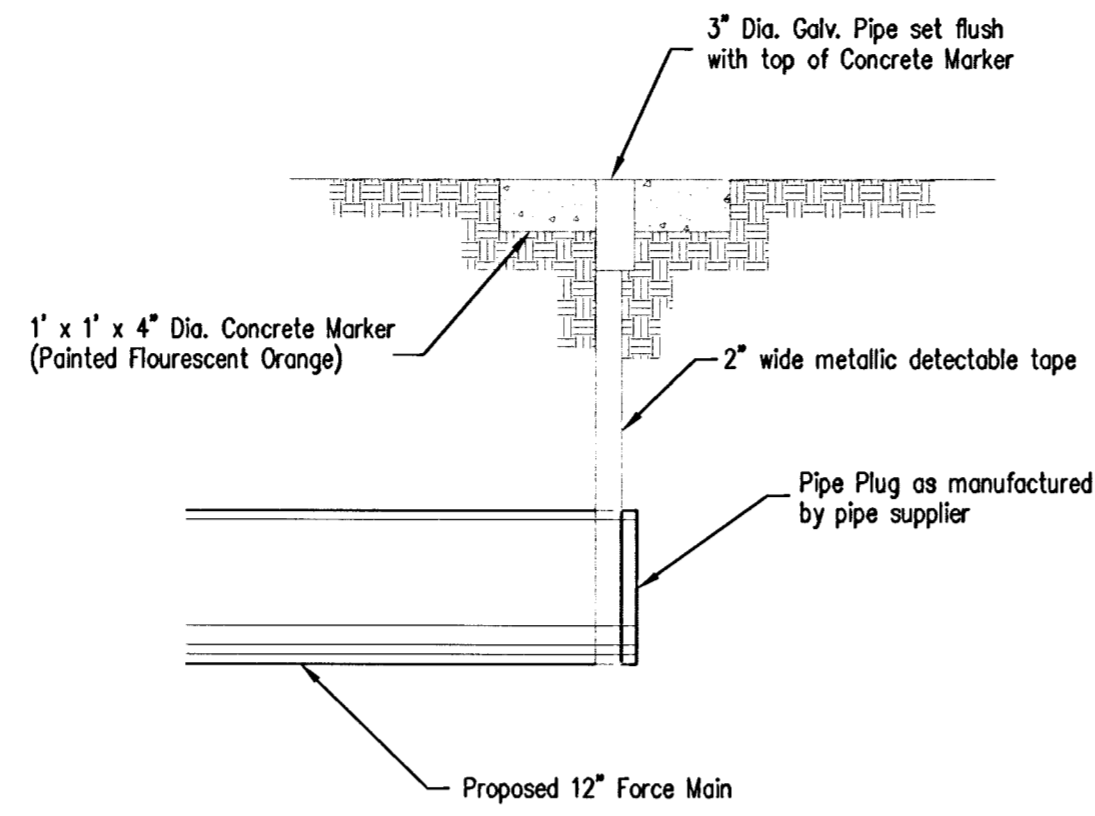
DATE PLOTTED 05/17/01	SHEET 7
PROJECT FORCE MAIN P2	OF 9



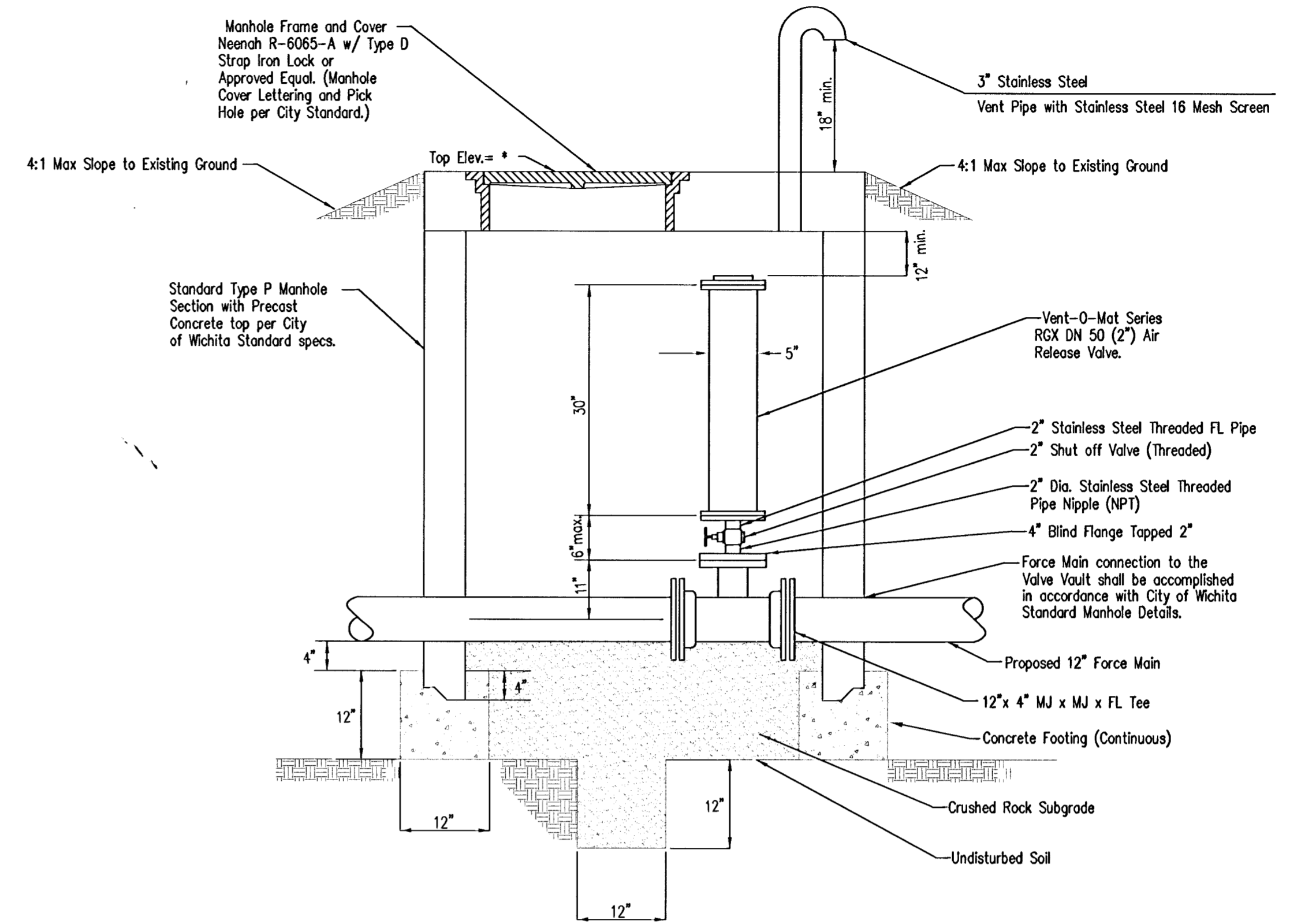
THRUST BLOCK SCHEDULE				
LINE SIZE	FITTINGS & ANGLES	'L'	'W'	'H'
12"	11 1/4"	2'-0"	1'-0"	2'-0"
12"	22 1/2"	2'-0"	1'-0"	2'-0"
12"	45"	2'-0"	1'-6"	2'-0"



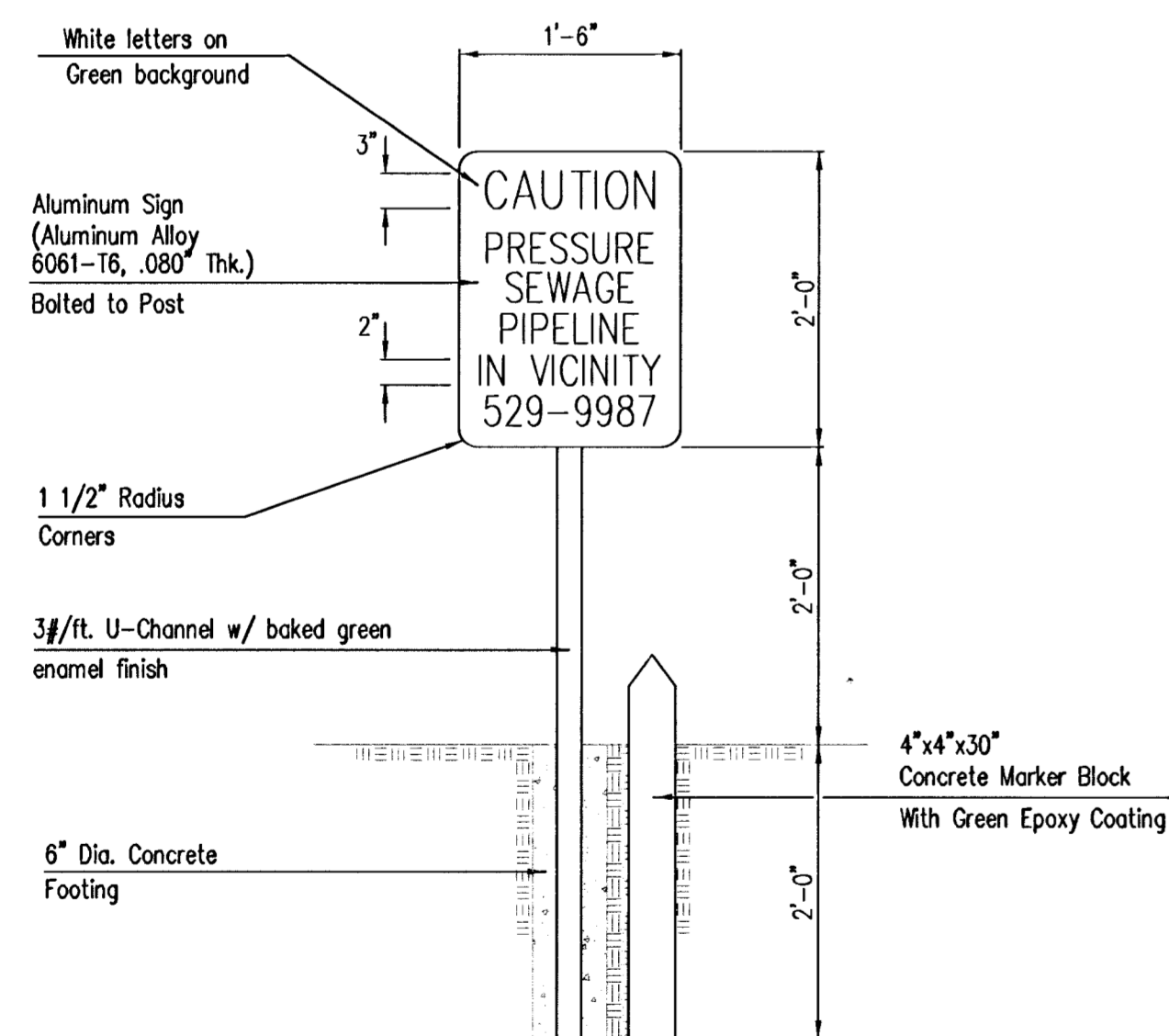
THRUST BLOCK DETAIL FOR HORIZONTAL BENDS



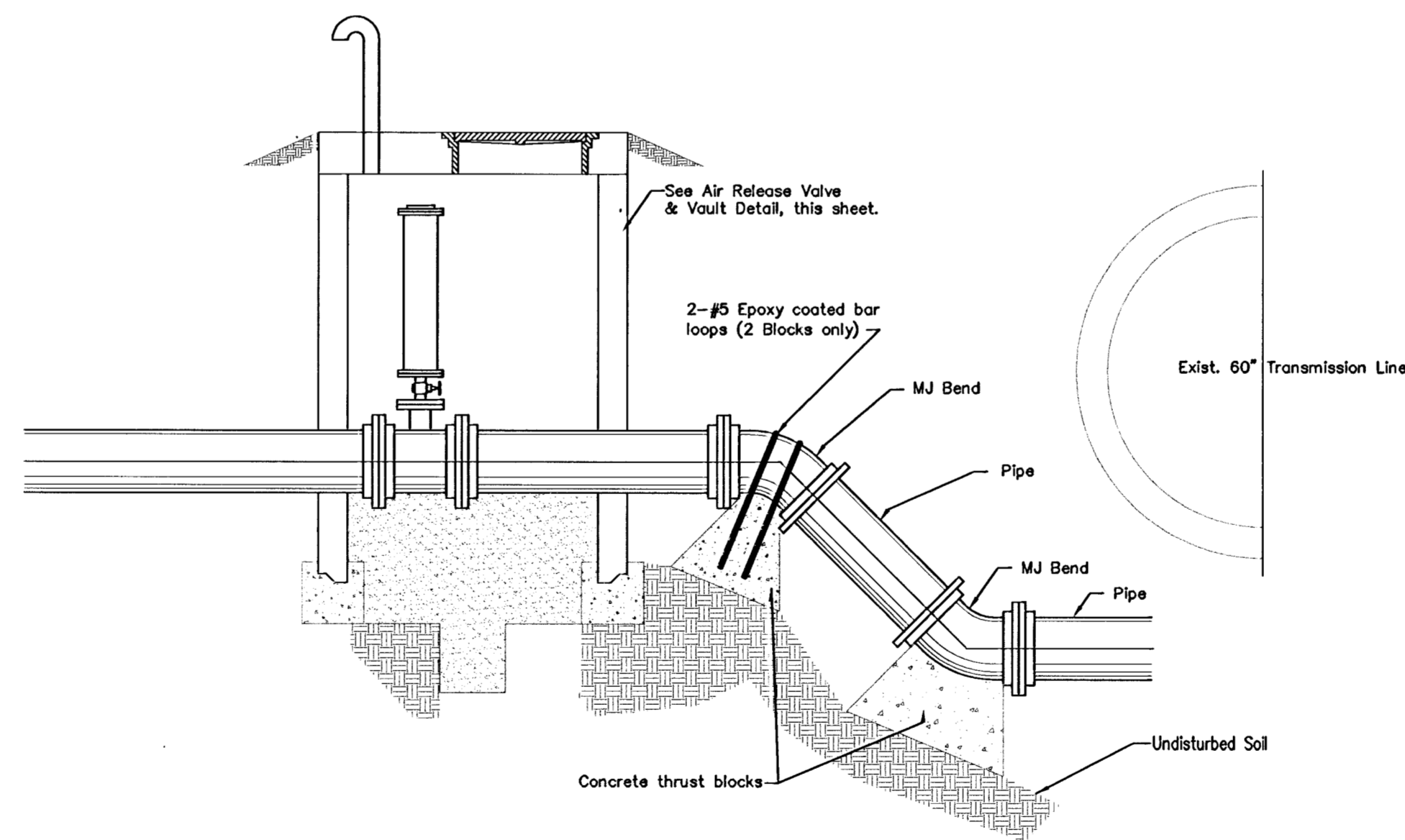
MARKER DETAIL  
(PLUGGING AND MARKER SHALL BE SUBSIDIARY TO THE LUMP SUM PRICE BID FOR PIPE IN PLACE)



AIR RELEASE VALVE AND VAULT DETAIL



FORCE MAIN WARNING SIGN DETAIL



AIR RELEASE VALVE AND VAULT WITH VERTICAL BENDS  
\* Sta. 27+21.88, Top Elev. = 1351.84

<p>THE CITY OF WICHITA</p> <p>CITY ENGINEER'S OFFICE CITY HALL - SEVENTH FLOOR 455 NORTH MAIN STREET WICHITA, KANSAS 67202 (316) 268-4501 (316) 268-4114 FAX</p>	<p><b>12" FORCE MAIN DETAILS</b></p> <p><b>BASIN 3 PUMP STATION</b></p>	
	<p>M. E. LINDEBAK P.E. - CITY ENGINEER</p>	
	<p>PROJECT NUMBER 468-83131</p>	<p>OCA # 624058</p>
	<p>DATE 10/30/2000</p>	<p>SHEET 9 OF 9</p>